

REMARKS

Claims 1-8 remain pending in this application for which applicant seeks reconsideration.

Independent claim 3 was rejected under 35 U.S.C. § 103(a) as unpatentable over Yanagawa (USP 5,953,432) in view of Stewart (USP 6,535,610) and De Vries (USP 6,128,395). Remaining dependent claims 1, 2, and 4-8 were rejected under Yanagawa in view of Stewart, De Vries, and Hatae (USP 5,675,655).

In contrast to the examiner's assertions, the combination still would not have taught the claimed first and second delay units that each supplies first and second delay processed signals to all of the speakers, as set forth in independent claim 3:

- (1) a first delay unit (e.g., 300) that provides a first delay for one of the branched audio signals and **supplies first delay processed signals to all of the loudspeakers of the array speaker unit in accordance with the first directivity control information**; and
- (2) a second delay unit (e.g., 300') that provides a second delay for another of the branched audio signals and **supplies second delay processed signals to all of the loudspeakers of the array speaker unit in accordance with the second directivity control information** (see Fig. 9).

The examiner now asserts that the Yanagawa/Stewart/De Vries combination would have taught independent claim 3. Specifically, the examiner asserts that Yanagawa discloses splitting the same input audio signal into a plurality of signals and outputting filter signals to all of the speakers in the array. The examiner, however, acknowledged that Yanagawa fails to disclose the claimed first and second delay units, weighting unit, and adding unit.

The examiner now contends that replacing Yanagawa's digital filters with Stewart's beam forming unit (which the examiner appears to be alleging to include the first and second delay units, weighting unit, and adding unit) would have been obvious to improve the directivity of sound.

Applicant disagrees with the examiner examiner's assessment that De Vries would have alleviated the shortcomings of Yanagawa as modified by Stewart because De Vries, similar to Yanagawa, also fails to disclose or teach the claimed first and second delay units.

Stewart is directed to a microphone technology, and not to an array speaker. Accordingly, the combination urged by the examiner would not have been tenable. Indeed, one of ordinary skill in the art would not look to a microphone technology for improving speaker directivity. Even if Stewart were deemed properly combinable for argument's sake, Stewart also would not have taught the claimed features (1) and (2) outlined above.

Referring to De Vries' Fig. 3, each of the delay units D_0-D_m only outputs to a single speaker. That is, the delay unit D_0 outputs only to the speaker SP_0 , the delay unit D_1 outputs only to the speaker SP_1 , etc. In this respect, De Vries, like Yanagawa, fails to teach outputting signals from each of the delay unit to **ALL** of the speakers.

In the claimed invention, sound outputs having different directivities are produced from one audio signal (i.e., input from one source) by outputting a plurality of signals from the first delay unit for the first directivity to all of the speakers (i.e., one for each respective speaker). Similarly, the plurality of signals output from the second delay unit for the second directivity are also output to all of the speakers.

In short, the combination urged by the examiner simply would not have taught the claimed features (1) and (2) outlined above.

Conclusion

In view of the foregoing, applicant submits that claims 1-8 patentably distinguish over the applied references and are in condition for allowance. Should the examiner have any issues concerning this reply or any other outstanding issues remaining in this application, applicant urges the examiner to contact the undersigned to expedite prosecution.

Respectfully submitted,

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23 DECEMBER 2011

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